

DESCRIPTION OF A NEW *DIPLOCREPIS* FROM PORT  
JACKSON.

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*DIPLOCREPIS* COSTATUS. sp. nov.

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Length of head  $3\frac{3}{10}$ , of caudal fin  $6\frac{3}{10}$ , height of body above vent 8, in the total length. Greatest breadth of head  $\frac{3}{4}$  of its length; it begins to narrow beyond the posterior margin of the eye, and is produced into a pointed snout, which is one-fourth of the length of the head. The eyes are slightly prominent, large,  $\frac{1}{5}$  of the length of the head, and equal to the interorbital space, which is flat. The nostrils are close together, near the upper front angle of the orbit, the anterior provided with a tentacle. The maxilla reaches to the vertical from the front margin of the eye. Lower lip with a skinny flap posteriorly. The upper jaw is the longer, and is armed with an outer band of strong recurved canines, the largest being at the symphysis, and on the middle of the sides; behind this row is a patch of villiform teeth, broadest anteriorly. In the lower jaw is an anterior band of moderately strong teeth, mingled with smaller ones, and a lateral row which terminates in four very strong canines. The dorsal fin commences one-fifth nearer to the tip of the tail than to that of the snout, and the distance of its origin from that of the caudal is exactly one-third of its distance from the snout. The anal commences slightly behind the dorsal, and both fins are entirely disconnected with the caudal, which is rounded. Pectorals rounded, with a broad fleshy base, and connected by a membrane with the ventrals, which consist of a spine,

entirely hidden beneath the skin, and four rays. The disk between them is longer than broad: that attached to the coracoids broader than long, and with a small angular cutaneous flap behind; the hardened epidermis entirely surrounds this disk, and is composed of series of circular plates with a central hollow, much resembling miniature disks; of these there are about four rows anteriorly and eight rows posteriorly, those on the inner side being always the largest; on the ventral portion of the disk these plates are arranged in a narrow band, and are very minute in front, but are large and in about seven series on the anterior membranous part of the ventrals, and their outer rays almost to their tips; the posterior edge of this portion of the disk is without plates, the length taken up by the entire sucking apparatus is exactly one-fifth of that of the fish. The vent is situate considerably behind the middle of the fish, and much nearer to the origin of the anal fin than to the posterior margin of the disk. There is a small genital papilla behind the anus. The coracoid flap extends upwards to fully three-fourths of the base of the pectoral, and is joined to the side by a median transverse web.

Uniform pink, appearing almost transparent when first removed from the water.

The example from which the description has been drawn up, was taken by the trawl on Shark Reef, Port Jackson, upon the 30th of May, and gives the following measurements.

Total length	...	...	...	...	25 lines
Length of head	...	...	...	...	$7\frac{1}{2}$ "
Origin of dorsal to snout	...	...	...	...	$15\frac{1}{3}$ "
Origin of dorsal to origin of caudal	...	...	...	...	$5\frac{1}{6}$ "
Anus to snout...	...	...	...	...	$13\frac{3}{4}$ "

There are about 10 strongly marked vertical ridges on each side, caused by the contraction of the muscles after death, but not present in the living fish; owing to this peculiarity, which is common to its congener, *Diplocrepis puniceus*, Rich., from New Zealand, I have proposed *costatus* as a suitable specific name for this interesting form.

From Richardson's fish it differs greatly in the number of rays in the vertical fins, the narrowness of the head, the smaller eye, the position of the dorsal and anal fins, the shape of the plates on, and small size of, the disk, the position of the vent, and the coloration. Its strong dentition separates it at once from *Crepidogaster* and *Trachelocheismus*, but curiously enough its fin formula is similar to that of the latter, from which however it differs greatly in the shape of the head, &c. It is very interesting to observe how our east coast species possess greater affinities to the two New Zealand than to the more southern and western *Crepidogaster*.

Since writing the above I have found a much smaller example, but  $1\frac{1}{3}$  inches long, in which the fin formula, measurements, and general characters exactly correspond with those of the larger individual. Registered number of type B. 7140.